

Students' Perceived Usefulness and Satisfaction with ChatGPT in Writing: A Quantitative Analysis

La utilidad percibida y satisfacción de los estudiantes con ChatGPT en la escritura: Un análisis cuantitativo

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Abstract: The rapid advancement of technology has raised concerns about Artificial Intelligence (AI) in education. This study examines students' perceptions of ChatGPT's usefulness and their satisfaction with its application in writing. Informed by the theoretical underpinnings of the Technology Acceptance Model (TAM), it investigates whether perceived usefulness would be a predictor of students' acceptance of ChatGPT as a writing aid. Findings reveal positive perceptions of ChatGPT for idea generation but a neutral view of its indispensability in writing. A weak negative correlation was found between perceived usefulness and writing satisfaction. This study contributes to the discussion on AI integration in writing classes, providing insights for optimizing AI tools to enhance academic writing.

Keywords: ChatGPT; perceived usefulness; writing satisfaction; AI-assisted writing; ESL students

Summary: Introduction. Methodology. Results and Discussion. Conclusion and Recommendations

Resumen: El rápido avance de la tecnología ha generado preocupaciones sobre la Inteligencia Artificial (IA) en la educación. Este estudio examina las percepciones de los estudiantes sobre la utilidad de ChatGPT y su satisfacción con su aplicación en la escritura. Usando el Modelo de

Aceptación Tecnológica (TAM), se investigan los factores que influyen en la aceptación de ChatGPT como una herramienta de apoyo en la escritura. Los resultados revelan percepciones positivas de ChatGPT para la generación de ideas, pero una visión neutral sobre su indispensabilidad en la escritura. Se encontró una débil correlación negativa entre la utilidad percibida y la satisfacción con la escritura. Este estudio contribuye a la discusión sobre la integración de la IA en las clases de escritura, proporcionando ideas para optimizar el uso de herramientas de IA con el fin de mejorar la escritura académica.

Palabras clave: ChatGPT; utilidad percibida; satisfacción con la escritura; escritura asistida por IA; estudiantes de ESL

Sumario: Introducción. Metodología. Resultados y discusión. Conclusiones y recomendaciones

1. INTRODUCTION

Technology, especially in the twenty-first century, has revolutionized a myriad of practices in various fields. In education, technology has been proven to provide tools that facilitate students' digital literacy skills while educators guide these students in developing the critical and effective use of these tools for motivation (Zarei and Fabregas, "Innovative" 77). Recently, much attention has been paid to research focusing on AI. Particularly in academia, AI chatbots have been the subject of many scholarly investigations, primarily because of the initial perception that they seemed to be a threat to academic practitioners. In more recent research, however, these chatbots, seen as a technology that will inevitably be part of education, are already considered to have some benefits for both teachers and students. ChatGPT, for example, can now be used for interactive learning, assessment activities, and giving feedback (Baidoo-Anu and Owusu Ansah 52). It can also encourage critical thinking and problem-solving skills through its real-time question-answering and explanation capabilities (Zarei and Fabregas, "The Incorporation" 31). However, this is not to say that ChatGPT does not have any drawbacks. One of the biggest limitations of AI chatbots is that they can generate wrong information; thus, overreliance on particular AI technologies can be problematic. In fact, frequent AI use could undermine critical thinking skills through cognitive offloading (Gerlich 1). Nonetheless, AI chatbots can, when used responsibly, leverage teaching and learning. Wu and Yu believe that higher education students are more impacted by the use of AI chatbots (like ChatGPT) as compared to those in primary or secondary education (1). While this can be country-specific or education system-specific, it is the interest of the present study to look at whether the same situation can be observed in a Philippine context.

Writing is often seen as the more challenging skill to develop (Jun 89; Gustilo 27) as compared to the other three macro skills (reading, speaking, and listening). As such, it is expected that students will try to seek assistance from various resources available to them, which include chatbots. Students resort to AI chatbots like ChatGPT because they can save time, provide information in almost all areas, and provide feedback, thus illuminating particular ideas (Ngo 4; Huallpa et al. 106). In the Philippines, recent research has revealed that Filipino students are apprehensive when it comes to conducting research; a study by Bastida and Saysi demonstrated that this apprehension is due to several factors, such as language proficiency, task management skills, procedural competence, digital competence and learning tools, personal competence and efficacy, teacher's feedback and evaluation, goal orientation, emotional stability, learning assistance, and external influence. Chatbots, as a technology that can readily provide a refined (albeit AI-generated) written output, can address these factors. Thus, students conveniently utilize chatbots for academic writing.

Teachers then have the responsibility to monitor students' use of AI chatbots in their written outputs. AI-generated text detectors such as Turnitin aid educators in checking students' work. They also prevent students from submitting purely AI-generated outputs. Hence, many students can only do so much with AI chatbots. At best, these chatbots serve as a guide and support for students writing for academic purposes. Previous studies have shown that AI chatbots improve students' writing skills, e.g., in the use of grammar (Shaari 53), even outperforming human assistance (Kim 37). Thus, there is an assumption that AI chatbots, to some extent, also motivate students when it comes to academic writing. Because of these, the present study investigates the extent of ChatGPT's influence (especially in a positive light) on Filipino college students' writing. It also looks into the relationship between students' perceived usefulness of ChatGPT and their writing satisfaction.

1.1 Problem Statement

The increasing integration of AI chatbots like ChatGPT in educational settings raises questions about their efficacy in enhancing students' writing proficiency. While past research has acknowledged AI chatbots' benefits in providing interactive learning and feedback, concerns remain regarding potential drawbacks, such as the creation of incorrect information and the

promotion of over-reliance (Baidoo-Anu and Owusu Ansah 57). This study aims to investigate students' perceived usefulness of ChatGPT and their satisfaction with using this tool.

1.2 Research Questions

1. To what extent do students perceive ChatGPT as a useful tool in enhancing their writing skills?
2. What is the level of students' satisfaction with their ChatGPT-aided writing?
3. Is there a significant relationship between students' perceived usefulness of ChatGPT and their satisfaction with their writing outcomes?

1.3 Research Hypotheses

1. Students perceive ChatGPT as a significantly useful tool in enhancing their writing skills.
2. Students exhibit a high level of satisfaction with their ChatGPT-aided writing.
3. There is a significant positive relationship between students' perceived usefulness of ChatGPT and their satisfaction with their writing outcomes.

1.4 Significance of the Study

This study investigates students' perceptions of ChatGPT and how it connects to their writing satisfaction, contributing to the ongoing discourse on the use of AI technologies in language training. The findings of the study can also assist educators in developing strategies for successfully integrating AI chatbots into language-learning curricula, which will enhance students' proficiency in academic writing and boost their engagement with the material. Additionally, understanding how ChatGPT impacts students' writing skills can assist in developing interventions that are specifically meant to address the challenges that students face when learning a language, such as language proficiency, process skills, and digital competence. By using ChatGPT to support students' writing

development, teachers may create more personalized and inclusive learning environments that meet a range of learning needs and references.

1.5 Literature Review

This section reviews previous research on the use of ChatGPT in language learning, with a particular focus on academic writing proficiency and motivation across diverse educational settings. It highlights key recent studies examining its potential as a learning aid, the challenges of overreliance, and the role of AI in enhancing students' academic performance while addressing both the benefits and limitations of ChatGPT in academic writing contexts. Lastly, it reviews studies on the advantages and disadvantages of using ChatGPT on Filipino students' behavior and communication skills.

Several studies have examined ChatGPT's usefulness as an AI tool and its impact on students' writing proficiency in language learning contexts. For example, using TAM, Yilmaz et al. showed that there is an overall positive perception of ChatGPT. Song and Song assessed ChatGPT's effectiveness in increasing writing proficiency and motivation among Chinese students studying English as a Foreign Language (EFL) in a mixed-methods study, with the findings of their research revealing that pupils who got AI-assisted instruction showed significant improvements in both writing proficiency and motivation when compared to traditional methodologies. Even though ChatGPT helped Chinese EFL students dramatically increase their writing ability and motivation, Song and Song's study raises important questions about the potential biases in the evaluation processes and the generalizability of the results to other studies on students' writing ability. It is important to consider the complicated concerns raised in these studies regarding contextual accuracy and an over-reliance on AI technology when evaluating ChatGPT's effectiveness in helping students improve their writing skills.

To gain additional insight into how students viewed and utilized ChatGPT for second language acquisition, Zhang et al. carried out a qualitative study, using surveys and interviews to gain greater insight into the ways that ChatGPT impacts language learning. Their study showed the importance of considering students' perspectives to help them write more effectively and how AI-based chatbots may be used to create more effective language learning materials that are tailored to each student's needs. Mahapatra used a mixed-methods intervention study to examine

ChatGPT's efficacy as a formative feedback tool for ESL students' writing ability. The results of this study showed a significant favorable impact on students' academic writing abilities, demonstrating ChatGPT's potential as a reliable writing aid and supporting ideas of feedback as a dialogic tool. This study suggests that, when educated appropriately, ChatGPT can be a helpful tool for offering feedback in large writing classes. While Mahapatra's study demonstrated the positive impacts of ChatGPT on ESL students' academic writing skills, a critical perspective would emphasize the relevance of taking potential biases and limitations into consideration in the study design and implementation. The results suggest that ChatGPT may be a helpful feedback tool in large writing classes, but more research is needed to evaluate its effectiveness across a variety of student demographics and writing contexts, including those relevant to the present study on students' writing proficiency. Özçelik and Ekşi investigated how ChatGPT aided in the development of writers' register knowledge for English writing (5). According to the results of their study, students believed ChatGPT was beneficial for learning formal registers, but they were skeptical about its capacity to teach neutral and informal languages.

Overall, the findings of the above studies demonstrate how ChatGPT can transform language learning by enhancing writing proficiency, motivation, and the acquisition of register knowledge. They also stress how important it is to consider the perspectives of the students, problems like contextual accuracy and over-reliance, and the larger implications and applications of AI in language learning scenarios. However, with these encouraging results, further investigation is still required to fully comprehend ChatGPT's long-term effects on students' writing proficiency.

According to recent studies, using AI tools like ChatGPT in language training is becoming more and more common. When using ChatGPT and other AI writing tools, Marzuki et al. looked into how EFL teachers evaluated the quality of their students' writing. Their research, which used qualitative methods, found that the use of AI writing tools improved students' writing quality, particularly in terms of organization and content. These findings demonstrated the potential benefits of enhancing EFL students' writing abilities with ChatGPT and other AI technologies. Athanassopoulos et al. conducted a study on the efficacy of ChatGPT as a learning tool for improving foreign language writing, especially for socially disadvantaged populations like refugees and migrants. The findings of their study revealed how ChatGPT enhances vocabulary and

grammar when writing in different languages. Moreover, the results indicated that the improved student versions of the work included more words overall, more unique words, and an average of more words per phrase. This demonstrates that ChatGPT can be a useful tool for helping language learners, especially those who are facing more difficult language situations. Critical factors need to be taken into account. Even though the above studies showed how ChatGPT can improve writing proficiency in language learning environments, more investigation is required to tackle the shortcomings and examine ChatGPT's efficacy across a range of educational environments and student demographics. It is also necessary to evaluate the ramifications of incorporating AI technologies, such as ChatGPT, into language instruction. These include issues with overreliance on AI tools and making sure that students from a variety of backgrounds have equal access to these resources.

Students using ChatGPT, or any AI tool for that matter, should first be aware of its functions for them to assess whether it can be helpful to them or not (Hockly 448). This will entail the productivity of students, especially in writing, equipping them with skills in using ChatGPT for language practice (Kohnke et al. 538). In the context of the Philippines, the study of Javier and Moorhouse provided an implication that these skills needed by the students may be developed with the assistance of teachers themselves to increase the benefits of such an AI tool in improving students' writing skills. Despite the benefits, however, ChatGPT also has negative effects. While Filipino college students moderately agree that ChatGPT can help give detailed answers "till they are happy with the response," they also believe that ChatGPT can be biased, prone to mistakes, or misused (Fabella 1638). ChatGPT, thus, despite its positive effects, "may still inflict hindrances in the learning process of the students" (Fontanilla et al. 33).

Many other studies support the stance that ChatGPT offers both benefits and drawbacks in academic writing among Filipinos. In Santiago et al.'s work, they showed that AI chatbots, including ChatGPT, are valued tools for enhancing writing, e.g., through paraphrasing and proofreading. They also stated that other benefits include improving quality, efficiency, and clarity of writing, as well as reducing errors, saving time, and fostering creativity. Drawbacks were also found by the authors, which are mainly due to overreliance on particular AI technologies, leading to hindered critical thinking and risks of incorrect suggestions and plagiarism. These drawbacks, especially plagiarism, could manifest mainly due to

ChatGPT's style of writing being different from that of an actual human writer. The study of Nañola et al. showed that Filipino student-written outputs dominantly used a collective voice, whereas AI-generated outputs primarily employed an individualized voice. Moreover, there are differences in sentence constructions and textual identities. Thus, cautious use of ChatGPT is suggested for students, especially since AI-generated text detection tools are readily available for assessing their writing.

Observations of Filipino educators also show the seemingly unavoidable pitfalls of ChatGPT despite its many potentials. For example, Barrot demonstrated that although ChatGPT can be a valuable writing tool that can produce human-like texts, generate comprehensive essays, grade students' written work, correct grammar, and to a certain extent reduce students' stress in language learning, it may also produce unintelligible responses, use unnecessary statements, lack capabilities in checking plagiarism, follow rigid writing templates, and generate inaccurate or non-existent bibliographic information. These can then lead to concerns regarding learning loss and decreased creativity and critical thinking. Hence, Barrot suggested that students be trained to evaluate the information ChatGPT offers and be encouraged to write their original outputs and use ChatGPT solely as a means to refine them.

When students understand the proper use of ChatGPT and how to properly employ it, it could offer many positive impacts. In a study carried out by Caratiquit and Caratiquit on ChatGPT's effects on students' academic performance in a Philippine educational institution, they found that ChatGPT positively impacts academic performance by enhancing students' learning motivation. As an academic support tool, ChatGPT piques students' interest, curiosity, and intrinsic motivation. This is provided through the AI tool's helpful resources, advice, and interactive elements. Caratiquit and Caratiquit claimed that "[t]hrough appropriate utilization, ChatGPT assumes a critical function in fostering educational advancement and facilitating superior outcomes in students' scholastic pursuits" (31).

Even in regional contexts of the Philippines, ChatGPT's academic impacts have also been explored. Vidal demonstrated ChatGPT's language translation abilities, which can be helpful in the context of Philippine regional institutions where students speak native Philippine languages as their first language (L1). The author also asserted that ChatGPT has the potential to enhance communication skills. It has been shown that while ChatGPT has its benefits for Filipino students, it offers disadvantages at

the same time. This could mean that the perception of these students in the use of ChatGPT may also vary depending on how (dis)advantageous it is to them. In the work of Hernandez et al., they showed that Filipino students' behavior on ChatGPT use may be influenced by factors like habit and intentions. Students' intention on ChatGPT is influenced by factors like performance expectancy and personal innovativeness. Thus, although Filipino students benefit from using ChatGPT, not everyone is interested in its use; some Filipino students do not find it effective, and this results in their reduced engagement with ChatGPT (Bote et al.). This calls for more investigations on the effects of ChatGPT on student performance, especially in writing, in connection with how they perceive the use of such an AI tool. This is addressed by the present study.

1.6 Theoretical and Conceptual Framework

This study builds on the position that students' perception of ChatGPT influences their satisfaction with using such an AI tool. This study thus adopts Davis's Technology Acceptance Model (TAM) to understand undergraduate students' perceptions regarding the use of ChatGPT in connection with the development of their writing skills. According to TAM, the features of a particular technology affect how an individual views its "usefulness" and "ease of use." On the one hand, the perceived usefulness is determined by various factors: image, output quality, result demonstrability, subjective norm, and job relevance. On the other hand, the perceived ease of use is determined by perceptions about computer self-efficacy, external control, computer anxiety, computer playfulness, perceived enjoyment, and objective usability.

In light of TAM, students' perceived usefulness and perceived ease of use regarding ChatGPT ultimately influence their overall satisfaction with the use of the tool in connection with their writing outcomes. The concept of the connections among these variables is presented in Fig. 1.

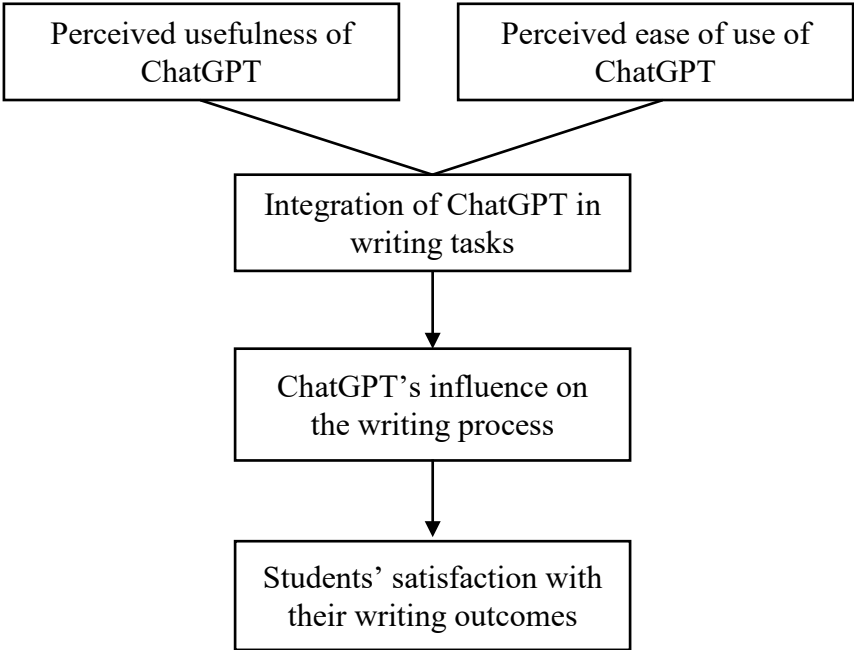


Fig. 1. Conceptual Framework

As seen in Fig. 1, students’ choice of integrating ChatGPT in their writing tasks is influenced by the crucial elements of TAM: perceived usefulness and perceived ease of use. This integration, in turn, results in the actual influence of ChatGPT in the writing process. For example, students can integrate ChatGPT into their writing process by asking how to properly structure their paper or how they could lucidly write and incorporate their ideas. Finally, when the writing task is done with the aid of ChatGPT, students’ writing satisfaction with their writing outcomes can be measured (and compared with other students.) Through this visualization, the effectiveness of ChatGPT in students’ writing can be investigated.

2. METHODOLOGY

This preliminary study adopts a quantitative research design. A random sampling technique was employed to gather data from 200 undergraduate ESL students who were enrolled in a Purposive Communication course at a private university in Manila, Philippines. All participants were confirmed

to have fundamental internet proficiency, as this study focused on students' academic writing skills using ChatGPT. Moreover, they were already familiar with ChatGPT, having previously used it for academic writing tasks. The study was conducted in two complete semesters (36 weeks) in 2024.

For the research procedures, the researchers sent a letter to the university's General Education Department, which is in charge of the Purposive Communication classes. This letter requested authorization for data collection from the participants of the study. A Likert Scale Questionnaire (LSQ) was adopted and adapted according to the objectives of the study (see Appendix). Prior to the actual data collection, two experts in the field checked the validity and reliability of the LSQ. Some questions were revised according to the feedback from the two experts. The LSQ was then pilot-tested with a group of 50 students, after which it was sent to all the participants via email. There are two parts of the LSQ: one set of questions focused on students' perceived usefulness of ChatGPT and another focused on their satisfaction with their ChatGPT-aided writing. Based on the survey, both these sets of questions have an excellent internal consistency (Cronbach's Alpha value of 0.960 and 0.973, respectively). The data were analyzed quantitatively using the statistical treatments employed: Mean, Standard Deviation, Pearson Correlation, Regression, and Analysis of Variance (ANOVA).

3. RESULTS AND DISCUSSION

The first research question that this study asks is about students' perceived usefulness of ChatGPT in their writing. Based on the survey of 200 respondents, the highest-rated aspect of satisfaction points to brainstorming ideas for essays. Specifically, this item in the questionnaire states, "I find ChatGPT useful in brainstorming ideas for my essays." On a 1 to 4 Likert scale, the mean score of this item is 2.99, suggesting that most respondents agree with the statement as it leans close to 3 towards agreement but not strong agreement. This indicates that the respondents find ChatGPT generally useful for brainstorming, even though it may not be generally viewed as highly effective. The standard deviation of this item is 0.740, reflecting moderate variability. This suggests that while many respondents find ChatGPT helpful for brainstorming, other opinions vary in such a way that some respondents are neutral or less enthusiastic. Meanwhile, the lowest mean score applies to the item that states,

“ChatGPT has become an essential part of my writing process.” With a mean of 2.60, it implies that respondents somewhat disagree or are neutral about ChatGPT being an essential part of their writing process. A standard deviation of 0.820 indicates that while most respondents have related opinions, there is still some variability, suggesting varying levels of reliance on ChatGPT among respondents. The implication of a low mean combined with a relatively high standard deviation when compared to other items suggests that not all respondents see ChatGPT as essential, with some viewing it as helpful only in certain or limited aspects of writing. The overall mean of all the items regarding the perceived usefulness of ChatGPT is 2.799. This indicates an overall lean toward an agreement (not a strong agreement) that the use of this AI tool is useful among the respondents. The 15 items about the perceived usefulness of ChatGPT have a Cronbach’s Alpha value of 0.960, indicating excellent internal consistency among the 15 items in the survey. This means that the items are highly reliable in measuring the same underlying idea. A high Cronbach’s Alpha (i.e. one that is close to a value of 1) signifies that the respondents answered consistently across similar items, reflecting a strong correlation among them. Thus, the categories/items are dependable in terms of evaluating user perceptions in this context.

For the second research question, this study asks about students’ level of satisfaction with their ChatGPT-aided writing. Based on the survey, the item with the highest mean score ($M = 2.86$) is the one that states, “ChatGPT meets my needs by providing writing assistance.” This implies that respondents mostly agree that ChatGPT meets their writing assistance needs. This indicates a generally confident or positive insight into ChatGPT’s usefulness in writing tasks. The standard deviation of this item is 0.685, which is considered low according to the range signified by the Likert scale used. It indicates fairly consistent responses and shows that most respondents share a comparable level of agreement, thus supporting the idea that the respondents find ChatGPT effective in giving writing assistance with no significant disagreement. The high mean and low standard deviation reveal that the item “ChatGPT meets my needs by providing writing assistance” signifies a key strength of ChatGPT. Meanwhile, the item with the lowest mean score ($M = 2.45$) states, “I feel more confident in my writing when I use ChatGPT.” This shows that respondents are closer to a neutral or slightly disagreeing with the view regarding confidence in their writing when using ChatGPT, suggesting that the use of the AI tool has not significantly enhanced their writing

confidence on average. This also reveals that it is a weaker area of ChatGPT's recognized effects compared to other features. The standard deviation of this item ($SD = 0.831$) indicates that there is some diversity in responses, suggesting that while some respondents feel more confident in using ChatGPT, others do not share this experience. Thus, the moderate SD displays that ChatGPT's ability to instill confidence varies depending on the user. The overall mean of the 15 items about students' level of satisfaction with their ChatGPT-aided writing is 2.708. Similar to the perceived usefulness, this indicates that the respondents are leaning towards agreement (not strong agreement) that they are satisfied with their writing as aided by ChatGPT. The Cronbach's Alpha value of the 15 items is 0.973. This value suggests excellent reliability of the scale. It indicates that the items are highly consistent and measure the same construct, revealing students' satisfaction with ChatGPT-aided writing. The consistency between Cronbach's Alpha and Cronbach's Alpha Based on Standardized Items confirms that the scale's reliability is not affected by differences in item variances. With such a high Cronbach's Alpha, the 15 items/indicators on students' satisfaction with ChatGPT-aided writing show that the items effectively capture various scopes of satisfaction, such as ChatGPT's usability, effectiveness in writing assistance, and impact on confidence or learning.

When the overall perceived usefulness is placed alongside the level of students' satisfaction with their ChatGPT-aided writing, there are some interesting observations. Looking at the mean and standard deviation (Perceived usefulness: $M = 2.7987$, $SD = 0.10197$; Satisfaction: $M = 2.7080$, $SD = 0.10936$), the two sections are fairly close, indicating that the responses are generally consistent but clustered in the mid-range of the four-point Likert scale. To determine if there's a significant relationship between perceived usefulness and satisfaction, the Pearson correlation is employed. Based on the statistical results ($r = -0.249$), there is a weak negative correlation between the perceived usefulness of ChatGPT and satisfaction with ChatGPT-aided writing. A p-value of 0.370 (greater than the threshold of 0.05) indicates that the relationship is not statistically significant.

The analysis has been taken further to determine if perceived usefulness predicts satisfaction. Using regression analysis, results ($R = 0.249$) indicate a weak relationship between students' perceived usefulness of ChatGPT and their satisfaction with their writing outcomes. However, it is not practically significant. The coefficient of determination ($R^2 =$

0.062) shows that only 6.2% of the variation in students' satisfaction with their writing is explained by the perceived usefulness of ChatGPT, which is quite low. The Standard Error of the Estimate (0.10990) reveals a relatively small value, indicating predictions are somewhat close to actual data, but the practical value is limited by the weak relationship. A Durbin-Watson value of 1.327 is within acceptable limits (1.0–3.0), indicating no serious autocorrelation among residuals. Using ANOVA, results show that there is no evidence that students' perceived usefulness of ChatGPT predicts students' satisfaction with ChatGPT-aided writing ($F = 0.862$, $p = 0.370$). Overall, the regression analysis confirms that students' perceived usefulness of ChatGPT does not significantly predict students' satisfaction with their ChatGPT-aided writing outcomes. The low R^2 value and non-significant ANOVA suggest that factors other than perceived usefulness may be more important in determining students' satisfaction with ChatGPT-aided writing.

Based on the results, the hypotheses presented in this study are rejected. This study first hypothesized that students' perception of ChatGPT would be a significantly useful tool in enhancing their writing skills. However, as previously presented, the respondents do not have strong agreement on ChatGPT's usefulness. Secondly, it was hypothesized that students would exhibit a high level of satisfaction with their ChatGPT-aided writing. However, it was again revealed that the respondents do not have strong agreement that they are satisfied with ChatGPT's assistance. Lastly, it was hypothesized that there would be a significant positive relationship between students' perceived usefulness of ChatGPT and their satisfaction with their ChatGPT-aided writing. Based on the correlation analysis, this hypothesis is also rejected. To reiterate, there is no statistically significant relationship between students' perceived usefulness of ChatGPT and their satisfaction with ChatGPT-aided writing. Moreover, students' perceived usefulness of ChatGPT does not predict satisfaction.

One would expect that a useful tool could lead to a satisfactory outcome. The results of this study show that, on average, students' perceived usefulness of ChatGPT and their satisfaction with ChatGPT-aided writing tend to be in a position that only leans toward the positive, rather than being overtly positive. This implies that ChatGPT can either be helpful or unhelpful. It coincides with previous research, which has shown that students believe that ChatGPT can be beneficial, but, at the same time, they can also be skeptical about it (Özçelik and Ekşi 3). The present study

only partially concurs with other findings, where ChatGPT has various advantages, ultimately resulting in students' improvement (Athanasopoulos et al. 818; Mahapatra 7; Marzuki et al. 1; Song and Song 2). In the Philippines, previous studies have found that ChatGPT has both benefits and drawbacks. In the present study, the responses of the students are, on average, between disagreement and agreement (though more partial toward agreement) that ChatGPT is a useful tool and that they are satisfied with its assistance. These findings could coincide with Barrot's and Santiago et al.'s findings, where it was revealed that ChatGPT can be a valuable tool but can also offer various drawbacks. More specifically, the findings of the present study concur with what Fabella revealed in his work that Filipino college students agree that ChatGPT can be helpful but can also be biased, prone to mistakes, or misused.

An important contribution that this study offers is the avenue for further investigating the relationship between students' perceived usefulness of AI tools and their actual satisfaction after using such tools. While many previous studies have shown the benefits (and drawbacks) of ChatGPT, the literature rarely talks about how perceptions of ChatGPT would lead to actual student satisfaction with their writing output. And it has significant implications for making educational policies about the use of ChatGPT in writing. If students do not find ChatGPT significantly beneficial, and if they are not satisfied with their ChatGPT-aided writing, then AI policies must be adjusted accordingly. Employing the theoretical underpinnings of TAM, this study was able to examine students' perceptions of the usefulness of ChatGPT and connect it with their satisfaction with their ChatGPT-aided writing. Specifically, TAM has been helpful in this study in its aspect of how individuals view a specific technology's usefulness. In the case of this study, the usefulness of a fairly new technology, ChatGPT, as perceived by college students, has been investigated. The usefulness aspect of TAM is then extended to analyze its connections with students' satisfaction with their writing when ChatGPT is used. Thus, TAM has proven to be a good tool in the investigations done in the present study (Yilmaz et al. 58).

4. CONCLUSION

This study provided valuable insights into ESL students' perceptions and satisfaction with ChatGPT as an aid in completing academic writing. Although students generally perceived ChatGPT as a useful tool for

specific aspects of writing, such as brainstorming ideas, it is not considered an essential part of the overall writing process. The findings of the study showed moderately positive satisfaction (no strong agreement) with ChatGPT-aided writing. Despite moderate satisfaction with the tool, the study highlights that perceived usefulness alone does not significantly account for students' satisfaction with AI-assisted writing. As found in the statistical analysis using Pearson correlation, there is a weak negative correlation between perceived usefulness and satisfaction ($p = 0.370$). Using regression analysis, findings reveal a weak relationship between perceived usefulness and satisfaction ($R = 0.249$). Therefore, other factors, including individual student characteristics, teaching methodologies, or the contextual application of ChatGPT, may play a substantial role in determining satisfaction with AI-assisted writing.

While ChatGPT indicates significant potential in supporting academic writing, its optimal influence hinges on strategic integration and a comprehensive understanding of the factors impacting students' satisfaction. By addressing these factors, educators and researchers can utilize AI tools to enhance students' academic writing. This study paves the way for future research to investigate further the multiple factors that influence students' satisfaction with AI tools. Investigating aspects such as user experience, individual digital competencies, and the interplay between AI assistance and traditional teaching methods could provide a more holistic understanding of how to maximize the effectiveness of AI in educational settings. In summary, this study contributed to the expanding body of research on the integration of AI tools, specifically ChatGPT, to enhance students' academic writing. By examining students' perceptions of the tool's usefulness and their satisfaction with AI-aided writing, the study provides valuable insights into how AI chatbots can be effectively utilized to support academic writing, especially among Filipino ESL students.

This study recognizes that other aspects, like prompting, might affect the students' responses to the survey. For instance, poor use of prompting might result in less satisfactory answers. Future studies can then include this aspect in investigating students' use of ChatGPT. In addition, future research could further explore the long-term impact of ChatGPT on writing proficiency by conducting longitudinal studies to track students' progress over time. In addition, investigations into the specific mechanisms through which ChatGPT influences academic writing quality, such as its role in idea generation, grammar improvement, and vocabulary

enhancement, could deepen our understanding of its educational potential. Moreover, comparing the effectiveness of ChatGPT across different student demographics or disciplines would provide a comprehensive understanding of its applicability in diverse learning contexts. Qualitative studies could explore students' attitudes toward AI-assisted learning deeper, offering a more complex understanding of their experiences. Lastly, controlled and effective use of ChatGPT in teaching could be a good avenue for future investigations.

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APPENDIX

Likert Scale Questionnaire

Please respond to the following statements by selecting a number from 1 to 4, where 1 indicates "Strongly Disagree," 2 indicates "Disagree," 3 indicates "Agree," and 4 indicates "Strongly Agree."

Section 1: Perceived Usefulness of ChatGPT in Enhancing Writing Skills

1. Using ChatGPT enhances my writing skills.
2. ChatGPT improves the quality of my written assignments.
3. I find ChatGPT valuable for organizing and structuring my essays.
4. ChatGPT helps me articulate my ideas more clearly in writing.
5. I believe ChatGPT contributes positively to the development of my writing skills.
6. ChatGPT assists me in overcoming writer's block.
7. I find ChatGPT useful in brainstorming ideas for my essays.
8. ChatGPT helps me refine my grammar and language usage in writing.
9. The feedback provided by ChatGPT enhances my writing clarity.
10. ChatGPT is an effective tool for improving my academic writing style.
11. ChatGPT helps me discover new approaches to writing tasks.
12. The ease of using ChatGPT allows me to focus more on improving the quality of my writing.
13. I feel that ChatGPT is a reliable tool for improving writing efficiency.
14. Using ChatGPT reduces the time I spend revising my drafts, allowing me to focus on enhancing the overall quality of my writing.
15. ChatGPT has become an essential part of my writing process.

Section 2: Students' Satisfaction with ChatGPT-Aided Writing

16. I am satisfied with the quality of the writing I produce with the help of ChatGPT.
17. ChatGPT meets my expectations for assisting in my writing tasks.
18. I feel more confident in my writing when I use ChatGPT.

19. ChatGPT contributes significantly to my overall satisfaction with my writing process.
20. Overall, I am highly satisfied with the writing outcomes I achieve using ChatGPT.
21. I am satisfied with how ChatGPT helps me manage my time in writing tasks.
22. The writing feedback from ChatGPT helps me improve my writing.
23. I feel satisfied with the creativity ChatGPT brings to my writing.
24. ChatGPT meets my needs by providing writing assistance.
25. The suggestions made by ChatGPT are satisfactory in enhancing my writing.
26. I am satisfied with how ChatGPT encourages me to experiment with different writing techniques or styles.
27. I am satisfied with how ChatGPT keeps me engaged to refine my writing throughout the process.
28. ChatGPT positively assists me in completing writing tasks and producing higher-quality work.
29. I am satisfied with the variety of writing styles and techniques I can explore with the assistance of ChatGPT.
30. The feedback and suggestions provided by ChatGPT aid me improve my writing substantially.